

Practitioner's Docket No. MOHR, CHARLES L.

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent application

of CHARLES L. MOHR and BRANDT C. MOHR  
Inventor(s)

for AUTOMATED MACHINE AND METHOD FOR FRUIT TESTING  
Title of invention

the specification of which is being transmitted herewith

OR

In re application of:

Application No.: 0 /

Group No.:

Filed:

Examiner:

For:

Assistant Commissioner for Patents  
Washington, D.C. 20231

**INFORMATION DISCLOSURE STATEMENT**

**CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10\***

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(Information Disclosure Statement [6-1]—page 1 of 11)

1c806 U.S. PTO  
09/690147  
10/17/00

NOTE: "An information disclosure statement shall be considered by the Office if filed by the applicant:

- (1) Within three months of the filing date of a national application;
- (2) Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application; or
- (3) Before the mailing date of a first Office action on the merits, whichever event occurs last."

37 C.F.R. § 1.97(b).

NOTE: "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section." 37 C.F.R. § 1.56(a).

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) each inventor named in the application;
- (2) each attorney or agent who prepares or prosecutes the application; and
- (3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. § 1.56(c).

NOTE: The "duty as described in § 1.56 will be met so long as the information in question was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98 before issuance of the patent." Notice of January 9, 1992, 1135 O.G. 13 -25 at 17.

**WARNING:** "No information disclosure statement may be filed in a provisional application." 37 C.F.R. § 1.51(b).

### List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

*(check sections forming a part of this statement: discard unused sections  
and number pages consecutively)*

1. ☒ Preliminary Statements
2. ☒ FORMS PTO/SB/08A and 08B (formerly FORM PTO-1449)
3. ☐ Statement as to Information Not Found in Patents or Publications
4. ☐ Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. ☒ Cumulative Patents or Publications
6. ☐ Copies of Listed Information Items Accompanying This Statement
7. ☐ Concise Explanation of Non-English Language Listed Information Items
  - 7A. ☐ EPO Search Report
  - 7B. ☐ English Language Version of EPO Search Report
8. ☐ Translation(s) of Non-English Language Documents
9. ☒ Concise Explanation of English Language Listed Information Items (Optional)
10. ☒ Identification of Person(s) Making This Information Disclosure Statement

*(complete the following, if appropriate)*

Sections 9, respectively, have been continued on ADDED PAGE(S).

NOTE: "Once the minimum requirements are met, the examiner has an obligation to consider the information." Notice of April 20, 1992 (1138 O.G. 37-41, 37).

## **Section 1. Preliminary statements**

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

A preliminary novelty search was made concerning this invention and the results are set forth herein.

## Section 2. Forms PTO/SB/08A and 08B (formerly Form PTO-1449)

NOTE: With respect to the list required by paragraph (b) of 37 C.F.R. 1.98, the Notice of April 20, 1992 (1138 O.G. 37-41) points out that:

*"The list may not be incorporated into the specification but must be submitted in a separate paper. A separate list is required so that it is easy to confirm that applicant intends to submit an information disclosure statement, and because it provides a readily available checklist for the examiner to indicate which identified documents have been considered. A copy of a separate list will also provide a simple means of communication to applicant to indicate the listed documents that have been considered and those listed documents that have not been considered. Use of form PTO-1449, "Information Disclosure Citation, is encouraged."*

NOTE: "An information disclosure statement may include two list[s] (and two certifications)) . . . in situations where some of the information listed was cited in a communication from a foreign patent office not more than three months prior to filing the statement and some was not, but was not known more than three months prior to filing the statement." Notice of April 20, 1992 (1138 O.G. 37-41, 40).

NOTE: With respect to the examiner's consideration of the Information Disclosure Statement, the Notice of April 20, 1992 (1138 O.G. 37-41) states:

*"If information is listed in the specification rather than in a separate paper, or if the other content requirements \*\*\* are not complied with, the examiner will notify applicant in the next Office action that the information has not been considered. It should be noted, however, that no copy of a U.S. patent application is required to be submitted. \*\*\* Where a U.S. patent application is properly cited, the examiner should obtain access to that file within the Office.*

*"Examiners must consider all citations submitted in conformance with the rules and this section and place their initials adjacent [sic] the citations on a list or in the boxes provided on a form PTO-1449. If the citations are submitted on a list other than a form PTO-1449, the examiner may write "all considered" and his or her initials to indicate that all citations have been considered. If any of the citations are considered, a copy of the submitted list or form, as reviewed by the examiner, will be returned to the applicant with the next communication. The original copy of the form will be entered into the application file. The copy returned to applicant will serve both as acknowledgement of receipt of the information disclosure statement and as an indication that the references were considered by the examiner. Forms PTO-326 and PTOL-37 include a box to indicate the attachment of form PTO-1449.*

*"Information which complies with requirements as discussed in this section but which is in a non-English language will be considered in view of the concise explanation submitted \*\*\* and insofar as it is understood on its face, e.g., drawings, chemical formulas, in the same manner that non-English language information in Office search files is considered by examiners in conducting searches. The examiner need not have the information translated unless it appears to be necessary to do so. \*\*\* The examiner should not require that a translation be filed by applicant. The examiner should not make any comment such as that the non-English language information has only been considered to the extent understood, since this fact is inherent.*

*"Since information is required to be listed in a separate paper rather than in the specification, there is no need to mark "All checked" or "Checked" in the margin of a specification containing citations.*

*"If a statement fails to comply with the requirements as discussed in this section for an item of information, a line should be drawn through the citation to show that it has not been considered. The other items of information listed that do comply with the rules and this section will be considered by the examiner and will be appropriately initialed.*

\* \* \* \* \*

*"A citation listed on form PTO-1449 and considered by the examiner in accordance with this section will be printed on the patent. A citation listed in a separate paper, equivalent to but not on form PTO-1449, and considered by the examiner in accordance with this section will be printed on the patent if the list is on a separate sheet which is clearly identified as an information disclosure statement and the list lends itself to easy capture of the necessary information by the Office printing contractor, i.e., each item of information is listed on a single line, the lines are at least double-spaced from each other, the information is uniform in format for each listed item, the list includes a column for the examiner's initials to indicate that the information was considered. If a citation is not printed on the patent but has been considered by the examiner in accordance with this section, the patented file will reflect that fact . . . "*

## Section 6. Copies of Listed Information Items Accompanying This Statement

**NOTE:** 37 C.F.R. 1.98(a)(2) requires that any information disclosure statement filed under § 1.97 shall include: "A legible copy of: (1) Each U.S. and foreign patent; (ii) Each publication or that portion which caused it to be listed; and (iii) All other information or that portion which caused it to be listed, except that no copy of a U.S. patent application need be included . . . ."

**NOTE:** The wording in § 1.98(a)(2)(iii) makes it clear that the requirement to submit a copy of each item of information listed in an information disclosure statement does not apply to the citation of a U.S. patent application. Notice of January 9, 1992, 1135 O.G. 13-25, at 14.

Legible copies of all items listed in Forms PTO/SB/08A and 08B (formerly Form PTO-1449) accompany this information statement.

*(complete the following, if applicable)*

- ☐ Exception(s) to above:
  - ☐ Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.
  - ☐ Cumulative patents or publications identified in Section 5.

**Section 9. Concise Explanation of English Language Listed Information Items (OPTIONAL)**

*NOTE: "Applicants may, if they wish, provide a concise explanation of why English-language information is being submitted and how it is understood to be relevant. Concise explanations are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability." Notice of April 20, 1992 (1138 O.G. 37-41, 38).*

- AA Merek, Jr., et al., shows a surface indentation hardness tester that is a computer controlled through closed loop system to determine hardness of metallic material. The only relevance is the general showing of a loop system linkage of a computer and hardness tester, as the system does not penetrate a viscoelastic material like an apple to a substantial depth and determine the parameters related to such penetration on a real time basis.
- AB Athanasiou, et al., shows a computer base system for measuring creep deformation of *in vivo* cartilage by an arthroscopic indenter. This reference is relevant only in the general showing of a computer based surface indentation device that measures creep deformation on a real time basis and is distinguished in that it does not intrude into the viscoelastic material to measure parameters of an intruding plunger on a real time basis, but rather measures only surface effects.
- AC Prussia, et al., shows a non-destructive testing device that impinges a gaseous jet on the skin of a fruit and optically measures deformation caused thereby to determine fruit characteristics. This reference is relevant only in this regard and is distinguished in that it is not an intrusive type tester that penetrates the fruit to a substantial depth between the skin to determine parameters relating to the penetration of the intrusion device on a real time basis to determine the nature of the fruit. The reference does not use a closed loop feedback system to determine operation of the testing mechanism or measure the tested parameters.

- AD Madigosky shows a computer associated system for in situ measurement of the viscoelastic properties of material by oscillatory surface impingement of a probe. The reference is distinguished as measuring surface parameters of surface impingement of a probe as opposed to the instant invention in which the probe penetrates the measured material to substantial depth and measures penetration parameters in the medial portion of the fruit on a real time basis to determine fruit characteristics therefrom that cannot be determined by surface impingement of a measuring device.
- AE Crochon et al., shows what in essence is a surface impingement type fruit tester that supports a moving fruit at three points, two of which are indented rollers and the third of which is an indentation type measuring device to provide non-destructive measurement in real time for a fragile moving fruit. The apparatus and measuring system are distinguished in providing a non-destructive testing system that measures various fruit condition parameters externally of the fruit without penetration of a probe therein as distinguished from the instant destructive system which measures parameters associated with the penetration of a probe within a substantial portion of a soft fruit to obtain different parameters that cannot be determined from outside the fruit surface.
- AF Shabel et al., shows a surface indentation measuring type device coupled with associated computer to determine the strength of hard metallic material from hardness evaluation. The reference is distinguished in that it is a non-destructive surface impingement tester as opposed to a destructive intrusion tester and it is concerned with measurements relating to hard metallic material as opposed to viscoelastic fruit that is the subject of the instant invention.
- AG Howard, et al., shows a surface impingement type hardness testing apparatus coupled with a micro-processor to automatically measure hardness and account for apparatus inaccuracies in so doing. This reference is distinguished in that it is a surface impingement type measuring device adapted for hard metallic materials as opposed to the instant apparatus and method providing an intrusion type testing probe that measures intrusion parameters in the medial portion of a viscoelastic tested sample to determine sample characteristics, such as in a soft fruit.

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- AH Fridley, et al., shows a non-penetrating surface "deformeter" for determining maturity of soft fruit by measuring penetration of a probe into the fruit's surface without disrupting the skin. This reference is distinguishable as being a non-destructive surface impingement type tester as opposed to the instant destructive penetration type tester which measures penetration parameters through the medial portion of a fruit to be tested as opposed to only in the surface area. The process of the reference is distinguished in that it bases maturity Determination on measurements only in the R 1 portion of a fruit, whereas the instant penetration device measures probe penetration parameters in three concentric internal zones of the fruit which provide different measurements and the basis for determining different maturity measurements.
- AI Hinnergardt, et al., shows a method of testing the tenderness of a slice of meat by piercing with a plurality of spacedly related semi-blunt needle like probes. A computer is coupled to the mechanism, but there is no indication that it controls the apparatus operations through feed back circuitry operating control devices responsive to sense parameters as in the instant apparatus. The mechanism provides a plurality of piercing means as opposed to the single intrusion cylinder of the instant device. The methods disclosed and claimed do not indicate whether the material is homogeneous or not and do not indicate the determination of piercing parameters in different parts of the meat being pierced to determine the overall nature of the meat which at that point is dead and not subject to a natural maturation process dictated by its nature as is the case of ripe fruit.
- AJ Fridley shows a penetration type tester for fruit that is of the manually operated intrusion type commonly heretofore used in regulatory fruit testing. The inventor recognizes problems associated with manual testing and seeks to lessen some of those problems. The instant invention differs in providing a completely



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mechanized intrusion system that is controlled by an associated computer through control devices operated by feedback type circuitry responsive to sensed apparatus condition for substantially greater accuracy. The penetrating plunger 91 is limited in its penetration by the collar immediately thereabove, but the instant plunger has no such limitations and appears to penetrate the fruit to a substantially greater depth to sense penetration parameters in different distinguishable fruit zones. The reference type of tester generally could not accurately determine pressure resisting plunger penetration at any particular point, could not determine the position of the plunger at any particular point, and commonly was used to measure only maximum pressure resisting plunger penetration as usually occurs at or near the skin of the fruit.

- AK Livingston, et al., shows a puncture strength tester for elastomeric material such as rubber and plastic. The device measures force required to rupture the material. The reference device is distinguished from the instant penetration tester in that the reference device is not computer controlled through feedback loop circuitry to mechanically move the tester responsive to sensed tester condition and the reference tester provides no means for determining sensor penetration characteristics on a real time basis during a penetration course through a substantial portion of an object to be measured such as a viscoelastic fruit. The reference tester would not measure penetration characteristics in the three distinguishable internal zones of a soft fruit and is not concerned with determination of the maturation state of a living botanical object.

**Section 10. Identification of Person(s) Making This Information Disclosure Statement**

The person making this statement is

*(check each applicable item)*

- (a) ☐ the inventor(s) who signs below

\_\_\_\_\_  
SIGNATURE OF INVENTOR

\_\_\_\_\_  
*(type name of inventor who is signing)*

- (b) ☐ an individual associated with the filing and prosecution of this application (37 C.F.R. § 1.56(c))

\_\_\_\_\_  
SIGNATURE OF INVENTOR

\_\_\_\_\_  
*(type name of inventor who is signing)*

- (c) ☒ the practitioner who signs below on the basis of the information:

*(check each applicable item)*

- ☒ supplied by the inventor(s).  
☒ supplied by an individual associated with the filing and prosecution of this application. (37 C.F.R. § 1.56(c))  
☒ in the practitioner's file.

\_\_\_\_\_  
SIGNATURE OF PRACTITIONER

\_\_\_\_\_  
KEITH S. BERGMAN

\_\_\_\_\_  
*(type or print name of practitioner)*

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